



Sen. Howard H. Baker Jr.

'Analysis Of Variance' Topic For Statisticians

D. G. Gosslee will discuss "Analysis of Variance" at next week's Statistics lecture series.

The lecture is set next Monday, July 29, at 9 a.m. in the East Auditorium of ORNL's 4500 building.

OMEGA-ALPHA

Tennessee was the last state to secede from the Union back in 1861 . . . and the first to be admitted back into the Union when the war ended.

Gift To Culture From Union Carbide

A \$2,000 gift has been made to the Oak Ridge Arts Council by the Nuclear Division, Union Carbide Corporation. The gift was presented by Dr. C. E. Larson, president, to Dr. A. H. Snell, president of the Arts Council.

Commenting on the gift, Dr. Snell said: "The Oak Ridge Arts Council is most appreciative of the continuing support of Union Carbide, which has been a major factor in maintaining a strong cultural program in the city."

"This money will be used to assist member organizations in the Arts Council, including the Oak Ridge Civic Music Association, Art Center, Playhouse, Junior Playhouse and Civic Ballet Association, each of which is making a significant contribution to the cultural life of the community."



DR. A. H. SNELL, PRESIDENT of the Arts Council of Oak Ridge, left, accepts a \$2,000 gift from Union Carbide from the Nuclear Division President C. E. Larson. The gift will assist cultural activities sponsored by the Arts Council, which includes music, art, drama and ballet.

Sen. Baker Guest At Health Physics Meet Next Monday

The honorable Howard H. Baker Jr., junior U. S. Senator from Tennessee, will be the guest speaker at the Country Club in Oak Ridge next week. The East Tennessee Chapter of the Health Physics Society meeting is set Monday, July 29, at 5:30.

A buffet dinner will be served at 6:30 p.m., and the technical program will begin at 7:30 p.m.

Sen. Baker will speak on the "Promise of Tomorrow," a semi-technical presentation.

A native of Huntsville, Tennessee, Baker attended the McCallie School for Boys, Chattanooga, was in the Navy V-12 program attending college at the University of the South, Sewanee, and at Tulane University.

He attended the University of Tennessee Law School.

Mrs. Baker is the former Joy Dirksen, daughter of Senator and Mrs. Everett Dirksen, Illinois. The couple has two children, Darek and Cynthia. Senator Baker enjoys amateur photography, and is a licensed pilot.

Reservations are a must at next week's meeting, and may be made through Max Scott, at his Y-12 number 3-7216. The cost of the dinner is \$3.

Nuclear Division Gives \$181,334 To ETCH Fund

A total of \$181,334.51 has been contributed to the East Tennessee Children's Hospital building fund by employees of the Nuclear Division of Union Carbide Corporation.

According to a recent breakdown from J. A. Marshall, who headed the three-plant drive, Y-12 lead the field in giving. Our plant gave \$83,276.53; while ORNL upped \$53,964.77 and K-25 donated a total of \$44,093.21.

Directing the drive here in Y-12 were J. F. Warner and B. W. Hensley. Warner chaired the drive among salaries employees, and Hensley, representing the Atomic Trades and Labor Council, spearheaded the drive among hourly employees.



Y-12 DEPUTY SUPERINTENDENT J. M. CASE, center, accepts a National Safety Council Award of Honor . . . the seventh that Y-12 has received from the NSC. The plaque was presented to the Y-12 Plant by NSC in recognition of an outstanding safety performance for 1967 by all of its employees. The Central Safety Committee, seen above, consists of (from left) Glen Atchely, W. Y. Gissel, Clarence Johnson, Bill Ebert, George Hyatt, N. A. O'Neal, Case, Roy Williams, Clyde Hopkins, Ken Denton, H. H. Stoner, Marvin Schwenn, Jim Warner, Harwell Smith and Harvey Kite.

Revolutionary Process For Stainless Steel Processing Revealed By Carbide

The introduction of a revolutionary new process for making stainless steel has been announced by Kenneth Rush, president of Union Carbide Corporation. The new refining process involves the simultaneous injection of argon and oxygen into a refining vessel separate from the arc furnace. It is considered to be the most significant advance in stainless steel making in 20 years. The process is another stage in the technological development of stainless steel in which Union Carbide has pioneered beginning with the corporation's invention of a practical low-carbon ferrochromium process in the 20's. This beginning stimulated the development of modern stainless steel as a significant part of the steel industry's product mix.

The new argon-oxygen process affords stainless steel producers substantial savings in raw material costs over those realized from current methods for making stainless. In addition, with a minimum of additional equipment, about twice as much stainless steel can be produced from a single electric furnace than is now possible; capital investment and operating costs per annual ingot ton are low; and the process gives operators improved process control.

Union Carbide holds several patents on the argon-oxygen refining process, which is the result of several years of development efforts at the corporation's Mining and Metals Division laboratories at Niagara Falls, New York, and the Linde Division laboratories in Newark, New Jersey, and Tonawanda, New York. A joint plant-scale development program was recently carried out with the Joslyn Stainless Steel Division of Joslyn Manufacturing and Supply Company. Beginning this April, production runs have successfully

been achieved in a new 20-ton vessel at Joslyn.

Goffe Benson, Linde Division president, commented, "Based on the highly successful trial heats and the production runs at Joslyn, we are now actively marketing this process on a license agreement basis to stainless steel producers." J. M. Saccomano, melt shop superintendent at Joslyn, reports that while refining with argon-oxygen is now just beginning, "Our production successes convince us that this is the biggest advance in stainless steel manufacturing since steel makers began blowing oxygen into the melt 20 years ago."

Basically, argon-oxygen refining is a two-step process. Unlike current practices where the electric furnace is utilized for both melting and refining, the Union Carbide process uses the electric furnace for what it can do best—melting the charge material. This charge is then transferred to a refining vessel where it is decarburized by injecting controlled amounts of oxygen and argon. In the operation as practiced at Joslyn, both oxygen and argon are injected from the bottom of the vessel.

The major cost saver in the

Continued on Page 4

Safety Council Award Of Honor Goes To Y-12

The National Safety Council's "Award of Honor" the highest merit award came to Y-12 recently for its outstanding safety performance during 1967. This was the seventh award of honor the plant has earned.

The award is presented only where an establishment's record satisfied rigid requirements laid down in the Council's award plan for recognizing good industrial safety records.

Y-12's frequency rate for injuries last year was 0.56 (as compared to 6.90 for industry as a whole.) Frequency rate is defined as the number of lost-time accidents per million man hours worked. For the sixth consecutive year Y-12 recorded a frequency rate under 1.

(This year, through June according to a recent plant Bulletin, the frequency rate has dropped to a new low of 0.18. However, our serious injury frequency is 7 this year thus far, slightly higher than the average of Union Carbide Corporation.)

And how rare is the Award of Honor among industries? In 1966, of a total of 8,807 companies surveyed only 474 earned the coveted Award of Honor.

Safe operations can and should be made safer. It's more than worth the effort. It prevents suffering, saves lives, and brings good will.

It is in the best interest of all Y-12ers that we strive daily to keep our injury rate going down. One injury a year is one too many . . . a perfect safety record is possible.

HOMEOWNER

It's easy to recognize a homeowner. He's always coming out of a hardware store!

SAFETY SCOREBOARD

The Y-12 Plant Has
Operated
121 Days Or
3,576,000 Man-Hours
(Unofficial Estimate)
Through July 21
Without a Disabling
Injury
Safety At Home
At Work, At Play

The Bulletin

Published Weekly For The
Y-12 Employees Of
UNION CARBIDE
CORPORATION



NUCLEAR DIVISION

JAMES A. YOUNG Editor

Member Appalachian
Industrial
Editor's
Association
American Association Industrial Editors

OFFICE
Post Office Box Y
Oak Ridge, Tenn. 37830
Telephone 3-7100

Markland Rites Held Sunday

The plant was shocked and saddened last week by the death of Mr. James L. Markland, Accounting and Budget. He died Thursday night, July 18, at his 65 Outer Drive, Oak Ridge, home.



Mr. Markland came to Y-12 April 24, 1961 after working some six years at K-25. His continuous service date is February 12, 1945.

Survivors include his wife Athala Markland, also employed in Accounting and Budget, and a daughter Mrs. Brenda Stubbs, Oak Ridge. One grandson also survives. Among his other survivors are his father Mr. Walter C. Markland, Middlesboro, Kentucky; sisters Mrs. Gladys F. Brandenburg, Batavia, Ohio; Miss Coy Markland, Middlesboro; and Mrs. Jena Mooney, Oak Ridge. Three brothers, Chritz, Phoenix, Arizona; Vaughn, Morristown; and Charles, Augusta, Georgia; also survive.

Funeral services were held Sunday, July 21, at 2 p.m. at Martin's Funeral Home, Oak Ridge. The Reverend George E. Naff Jr., pastor of Kern Methodist Church where the Marklands are members, officiated. Burial was in the Oak Ridge Memorial Gardens.

Deepest sympathy is extended to the Markland family.

Mail Department's Head Attending D.C. Meeting

Orel C. Hartman, head of Y-12's Mail Department, is among the 10-man delegation from this area attending the National Postal Forum in Washington, D. C. this week. The forum is scheduled July 24-25 at the Washington Hilton Hotel. Postmaster Van D. Hicks said that the ten members of the Oak Ridge Area Mail Users Council will probably be the largest delegation attending from any city in the nation for this size post office.

Others attending, besides Hicks and Hartman, are R. R. Tippy, K-25, president of the Area Council, John Brennan, Tom McClain, A. L. Mayfield, T. W. Laughlin, Leslie Dale; all from Oak Ridge; and Judge Alexander and Postmaster Coker, Jacksboro.

Approximately 2,000 business people and postal experts are expected at the two-day session.

The postal conference expects President Johnson to address the group at a banquet tomorrow night.

It is always time for security.

UT Will Offer Special Courses

The University of Tennessee is sponsoring some special courses during Tennessee Industries Week. Each course will be directed by a senior professor who is sympathetic to the problems of practicing engineers. Emphasis on useful knowledge by the student is cited, rather than academic knowledge displayed by the professor. The special lectures, laboratories and individual consultations will include informal evening sessions. The courses are limited to 10 students each, and the fees will be \$150 plus expenses.

To be offered will be INTRODUCTION TO OPTIMIZATION; QUALITY ASSURANCE TECHNIQUES; POWER REACTOR EVALUATION; APPLIED RADIATIVE HEAT TRANSFER; MECHANICAL VIBRATION; CELESTIAL NAVIGATION; CHEMICAL REACTOR DESIGN THROUGH COMPUTER SIMULATION; NETWORK-BASED PLANNING AND CONTROL; POLYMER ENGINEERING; BEHAVIOR OF LOADED STRUCTURES; PRESSURE VESSEL DESIGN; INTEGRATED CIRCUITS AND THEIR APPLICATIONS; LOGIC DESIGN OF COMBINATIONAL AND SEQUENTIAL NETWORKS; PROTECTION SYSTEMS FOR NUCLEAR POWER PLANTS; WATER POLLUTION CONTROL; INTRODUCTION TO LASER PHYSICS AND APPLICATIONS; INDUSTRIAL SAFETY; HEAT TRANSFER; DYNAMIC ANALYSIS OF SYSTEMS BY STATE VARIABLE METHODS; MICROWAVE CIRCUITS AND MEASUREMENTS; FUNDAMENTALS OF ANALOG COMPUTATION; QUANTITATIVE TECHNIQUES TO AID IN THE SELECTION AND DEVELOPMENT OF SUPERVISORY AND MANAGEMENT PERSONNEL; CLASSICAL THERMODYNAMICS; REVIEW OF THE PRINCIPLES OF THE HEAT TREATMENT OF METALS AND ALLOYS; NUMERICAL METHODS AND COMPUTER APPLICATIONS IN CIVIL ENGINEERING; INDUSTRIAL DEVELOPMENT—HOW TO START A NEW INDUSTRY; INDUSTRIAL GAS CLEANING; PLASMA FUNDAMENTALS; SOLID-STATE PULSE, SWITCHING AND WAVE-SHAPING CIRCUITS; DESIGN METHODS FOR VISCOUS FLOW PROCESSES; and MACHINE DEBUGGING AND PROCESS IMPROVEMENT.

The conference will be held during the week of September 9-13. Information may be obtained from Roy F. Center, Jr., director of conferences and institutes, The University of Tennessee, 2004 Ogden Avenue, Knoxville 37916. The courses are sponsored by the College of Engineering, School of Architecture, Space Institute and the Division of University Extension at U.T.

ORAU'S Love To Lead Physics Seminar Friday

Friday's Physics Division seminar will center on the "Mossbauer Measurements with ⁶¹Ni in 3d Transition Metal Alloys." John C. Love, ORAU Fellow from Ohio State University, will lead the seminar.

It is set for Friday, July 26, at 3:15 p.m. in the East Auditorium of ORNL's 4500 building.

AIR POLLUTION

The other day a politician said nothing could be done about air pollution until after the elections. Just exactly what did he mean by that crack?

CLARK CENTER RECREATION PARK DECAL APPLICATION

Name _____ Badge No. _____

Plant _____ Building and Room No. _____

Home Address _____ City _____

Number of decals needed (one per vehicle) _____

Vehicle License No. _____

IN CASE YOU MISSED FILLING out an application for a decal to allow your car entry into the Clark Center Recreation Park, we are repeating it this week. The Recreation Department has issued several hundred of the decals which should be placed on the left front bumper of your auto. (That's the side the driver is on.)

Cathy Whitehead Has Big Day May 21

May 21st was a very special day for Cathy Whitehead. This was her birthday, as well as Graduation Day at Clinton High School, where Cathy graduated sixth in her class of 260 with a 3.87 average. She was an honor student in elementary school also and was salutatorian of her 8th grade class.

Cathy was drum major with the Clinton High Band (the only girl to ever hold this position at Clinton). She was editor of the school yearbook, served four years on the Clinton Teen Board, National Honor Society and Senator Baker's Youth In Government Committee. She received a Biology Foundation award this year.

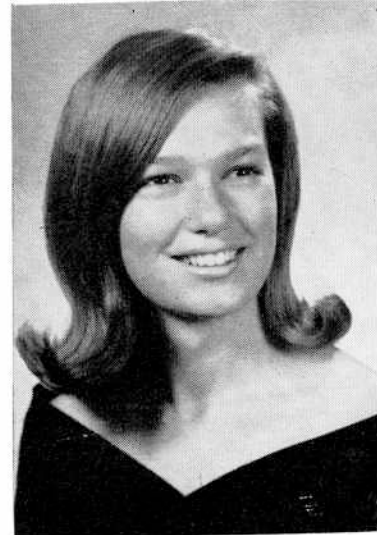
In the summer of 1966 the graduate studied for six weeks in France at the Foreign Language League.

Cathy is working this summer at the Clinton Municipal Pool and will enter Emory University, Atlanta, to study Biology this September.

H. D. Whitehead, Cathy's father, is in Y-12's Ceramics and Plastics Development Department.

RX FOR PAYMENT PAINS

For a healthier financial condition, stop in at the Y-12 Credit Union and see the advantages of saving or borrowing in your own financial institution.



Cathy Whitehead

Engineering Technicians Attend National Meet

The American Society of Certified Engineering Technicians held their annual meeting recently in Fort Worth, Texas. Members from the Oak Ridge-Knoxville Chapter attending were R. E. Dial, T. A. King, B. H. Montgomery, and H. E. Penland, all of ORNL. Y-12ers N. R. Parrott, C. G. Ross and J. C. Thompson also attended the June 27-30 meeting.

The local chapter installed its new officers at the Elks Club, Oak Ridge, July 19. Taking office were B. H. Montgomery, president; T. A. King, director of ASCET; D. L. Aubuchon, vice

Karns Folks Say 'Come To Fair'

Several Y-12ers are active in promoting the Community Fair in Karns, set for the early part of August. The Karns Community Fair will be held August 9 and 10 at the High School and Grammar School buildings. Flower, field and garden exhibits, honey show and other competitive exhibits will be in the gym on Saturday, August 10. The barbecue and ham dinner will be served in the grammar school cafeteria from 4 p.m. until 8:30 p.m. on Saturday . . . costing \$1.50 for adults, \$.75 for children.

On Friday night there will be a variety show, featuring a "womanless wedding," which should be rather interesting. A small admission charge will be held for this show.

Those who have tasted Karns Fair's barbecued chicken will be welcome again along with many new partakers. It is suggested that you buy your ticket in advance before the date if possible. They are available at the John R. Price Real Estate office, or at Helton's Hardware Store in Karns at the traffic light, or from any Karns resident.

That's Saturday, August 10, at Karns.

president; J. C. Thompson, secretary; H. E. Penland, treasurer; and R. E. Jurko, R. E. Dial, G. E. Mills, R. L. Durall and N. R. Parrott, board members.



A Y-12 WINDOW IN OAK RIDGE was part of the Industry Appreciation Week displays throughout town recently as the Chamber of Commerce of Oak Ridge saluted the community's breadwinners. Above Bobby Samples, left, and Harry Templeton, of the Graphics Art section, inspect the window which was in the Sears Store, in Downtown Oak Ridge. The color display was assembled by Samples and Templeton.



Y-12 ER BEN ETHRIDGE won third-place in July Skeet firings, proving that newcomers can be made welcome into the winning circles. Skeeters shoot on a handicap basis (also penalizing previous winners) so that novices can fire along with the best of the old-dead-eyes.

Welfare, Fry Shoot Perfect In Skeet

Fred Welfare, ORNL, fired an even perfect 50 score in the July Skeet Tournament. (ORNL's D. Fry did likewise, but was firing under penalty due to previous winnings.)

Ken Bahler finished second with a 48.654, and B. Etheridge, Y-12, came in third with a 47.600.

The next shoot will be on August 4 at 1 p.m. at the Oak Ridge Sportsman's Association range.

All tournaments are fired under a handicap system and a penalty system which are designed to allow the newcomers to compete with the oldtimers. All interested Carbide shooters are invited to participate in the monthly tournaments.

July Skeet Results:

Firer	H'cap Score
T. Webber, Y-12	47.947*
B. Etheridge, Y-12	47.600
D. Fry, X-10	50.000
C. Theobald, K-25	46.640
B. Seales, Y-12	46.000
K. Bahler, Y-12	48.654
C. Asmanes, Y-12	48.988*
R. Allstun, Y-12	47.403
J. Bell, X-10	46.000
C. Brewster, Y-12	48.206*
J. Allison, K-25	47.440
F. Welfare, X-10	50.000
P. Patton, Y-12	46.625

Winstead-Ferguson Melton Hill Leads

The Winstead-Ferguson team stays atop the Melton Hill Golf League after sharing three points last week with the Holly-Tilley two.

Six big points went to Bell-Burrus over Stewart-Butler, and to Tiller-Culberson over Brown-Gresham. Five point wins were registered by Alvey-Phillips past Rogers-Thompson, and Parrott-Parker by Hamby-Braden.

Four point wins went to Poly-Morehead over Carter-Jones, and to Clabough-Nobles over Butler-Stinnett.

Newt Hamby carded low scratch score of the day with a 38 . . . Dan Culberson scored a 32 handicap total for the day.

Team	W	L
Winstead-Ferguson	34	8
Stewart-Butler	31	11
Alvey-Phillips	29	13
Braden-Hamby	27	15
Holly-Tilley	23	19
Bell-Burrus	22	20
Tiller-Culberson	21	21
Clabough-Nobles	19	23
Rogers-Thompson	19	23
Carter-Jones	17	25
Brown-Gresham	17	25
Parrott-Parker	16	26
Butler-Stinnett	11	31
Poly-Morehead	8	34

Softball Play Opens 2nd Half

Y-12 Braves, along with the K-25 Colts and the Gashouse Gang maintain a perfect record in the second half of the Softball League, just opened.

The week of July 8 saw the Gashouse Gang demolish the Cardinals 13 to 12 . . . as the game went into an extra inning. Y-12's Big Shop team beat the Bat Boys 8 to 7. The big Braves won their first game in the new season 10 to 5 at the expense of the Pirates.

The J-Birds took a forfeit win from Beta Two. The Colts outdistanced the White Sox 27 to 3. The Eagles took the UCC All Stars to task to the tune of 24 to 12.

Thursday, July 11, saw the Pirates pelt the Bat Boys 11 to 6. The Gashouse Gang beat the Y-12 Eagles 7 to 4.

Last Monday's action began as the Cardinals culled the J-Birds 11 to 3. Charles Hollnad homered for the winners . . . Curtiss Hill for the losing Birds. The K-25 Colts clipped the UCC All Stars 7 to 5 in a close one also Monday.

Y-12's Big Shop team sank the White Sox 15 to 9 . . . as Bill Brucher collected a home run and a triple.

Y-12's Eagles opened play Tuesday by taming the J-Birds 14 to 5. Hugh Richards, R. Greene and Trig Myhre all homered for the winners.

The Pirates won big over the White Sox in action Tuesday 26 to 3. George Reece, Ernie Collins and Bill Elliott all homered for the winning squad.

Filling out the action Tuesday the Colts clamored all over the field, scoring at will, downing the Big Shop team 30 to 11. Two home runs were earned by Sam Woodfin, John Keith, and Sam Duncan. Cates and Howard poled one each for the Colts.

Perry Bullard bulled through with two for the losing team.

A game ahead of schedule got wedged in Wednesday, as the Braves skunked the Hawks 32 to 0. Jim Shoemaker and Larry McDonald were the big heroes . . . Shoe getting two homers . . . Mark three! Steve Babb earned one and Ted Lankford did likewise.

Another game was played Wednesday as the Pirates put the Hawks to bed 25 to 5. Almost everyone on the Pirate team poled a homer . . . Kelly, Peters, Collins, Reece and Porter.

Thursday dawned (still no rain) as the Gashouse Gang from K-25 won game three at the expense of the UCC All Stars 10 to 8. The All Stars Dale Legg beat out a homer.

The Braves beat the Cardinals 20 to 7 . . . as John Evans, Jim Carden and Jim Shoemaker all earned their salt by putting balls out of the park.

Final action of the week saw the Beta Two team hit at the Bat Boys 16 to 11. The Beta Two squad saw Chester Anderson and Denver Teague knock homers.

League standings follow:

Team	W	L
Braves, Y-12	3	0
K-25 Colts	3	0
K-25 Gashouse Gang	3	0
Pirates, Y-12	3	1
Eagles, Y-12	2	1
Big Shops, Y-12	2	1
Cardinals, Y-12	1	2
J-Birds, K-25	1	2
Beta Two, Y-12	1	3
UCC All Stars	0	3
White Sox, Y-12	0	3
Bat Boys, Y-12	0	3

ADVERTISING PAYS

A firm in this area knows that advertising pays. They ran an advertisement recently for a night watchman . . . and two days later were robbed clean!

Tact has been called that unsaid part of what you think.



SAM THE SURFER . . . a Pointer bird dog . . . enjoys a spin around Ft. Loudon Lake, thanks to his master at the helm W. C. Coffey. Coffey, who works in Y-12's Research Services, has trained the dog to do other tricks than point out a covey of birds. He is seen above plying through the water on a July day. (Thanks be to Cal Lunsford for story and photo.)

Y-12er Teaches Bird Dog To Enjoy Water Sports To Crowd's Amazement

'Sam the Surfer' he might be called (with apologies to the Mafia!) . . . that's W. C. Coffey's Pointer bird dog.

Sam, a veteran of a school in Georgia for bird dogs, was obtained from Coffey's brother . . . when he was a mere six weeks old . . . about four years ago.

Sam, almost human in many respects, took up his latest kick recently to the joy of almost everyone near Ft. Loudon Lake. His first experience at riding behind the family boat was on an inner tube and every time the motor started, Sam was on hand to hitch a ride.

His owner then designed a small surf board so that the canine can enjoy surfing up and down the lake with the family this summer. People along the shore line and in other boats stop and gape as the Coffey boat soars by. (One beachcomber vowed he was going to give up drinking for good!)

Coffey, who lives in Lenoir City, works in Research Services. (Our thanks to another Research Services employee, Cal Lunsford for the story and picture. Cal does a lot of work for the Loudon County Herald, in addition to a weekly column "Back in the Good Old Days.")

Dave Alford Is Top Pistoleer

At the end of the first quarter in the 22 calibre pistol league, Dave Alford leads the pack with a 291.211 handicap score. He is followed by X-10's W. Zobel with a 291.191 . . . and by ORNL's W. B. Dress's 290.219.

Other scores:

Firer	H'cap Score
D. R. Alford, Y-12	291.211
J. E. Attril, X-10	283.162
C. Bamberger, X-10	282.634
J. E. Brewer, K-25	288.254
T. N. Burklow, Y-12	287.603
G. L. Davis, Y-12	287.616
W. S. Denton, Y-12	285.889
W. B. Dress, X-10	290.219
C. E. Harding, X-10	284.810
D. W. Ellison, K-25	286.550
H. C. Hoy, Y-12	283.296
L. C. Knighten, K-25	287.768
D. Kiplinger, X-10	286.513
W. A. Less, Y-12	283.396
G. McRae, K-25	286.074
J. M. Miller, X-10	287.896
V. C. Raanen, X-10	285.718
E. G. Richardson, X-10	289.529
D. R. Sears, X-10	285.266
W. M. Stanley, X-10	284.377
M. Suggs, X-10	286.900
T. C. Swindell, Y-12	287.811
R. H. Ward, X-10	288.256
G. R. Wilson, X-10	287.337
W. Zobel, X-10	291.191

Little Benefits Cited In Obtaining Sun Tan

Before you spend hours frying in the sun for a good tan, remember that the physical benefits of a suntan are practically nil. The only beneficial effect of sunlight, other than the psychological lift of sporting a good tan, is the formation of vitamin D, and our diet already provides an ample supply of this vitamin.

DEFINITION

False doctrine has been defined by our favorite five-year old as "the doctor giving the wrong medicine."

Gray-Copeland Are Ace Horseshoers

Horseshoe pitching leads go to Gray-Copeland as the ORNL team wrested six points from Reed-Stephens recently. The Raper-Eubanks (Eubanks replacing Avery Kendig in the line-up) took nine points from Wyatt-Hensley. Case-Miller took the full count from Young-Holsopple.

Last week's action saw the leaders Gray-Copeland win seven from Hutto-Tillery. Wyatt-Hensley won a forfeit win from Young-Holsopple. Raper-Eubanks took five from Reed-Stephens.

Team	W	L
Gray-Copeland, ORNL	38	16
Case-Miller, ORNL	35	10
Durham-Bailey, ORNL	33	12
Raper-Eubanks, Y-12	33	21
Reed-Stephens, Y-12	27	27
Wyatt-Hensley, Y-12	25	29
Hutto-Tillery, ORNL	13	41
Young-Holsopple, ORNL	3	51

SW Golf Lead To Hammill-Plemons

Bill Hamill and Roland Plemons still dominate the Southwest Point Golf League, after a four point win over Groppe-Argo (Emerson subbing for Argo). Also winning four were the Trues over Ellis-Pryson.

Winning five were Mee-Wright over Tuell-Ridding . . . and Ludwig-East over Garber-Huddleston. Bill Mee reported in with low scores of the week . . . 37 scratch, 34 handicap.

Team	W	L
Hamill-Plemons	38	10
True-True	34	14
Pryson-Ellis	27	21
Mee-Wright	27	21
Ludwig-East	26	22
Garber-Huddleston	16	32
Groppe-Argo	16	32
Tuell-Goodwin	6	38

Pugh's 3-Under Par Low At Niota!

Jim Pugh repeated as a July winner in golf tournaments, aching a three under par 69 score at Niota Saturday, Jim's front nine saw him with three eagles . . . and three on the back nine as well! He paced the Y-12 crowd that gathered July 20, at Springbrook Country Club, Niota.

Benny Crass came in second with a 74 (which gave him first place in handicap scoring with 69).

Other winners were John Baker, 76; Bill Hamill, and C. M. Cheek, each with 77 scratch.

Handicap winners in the first flight were listed as E. N. Rogers, Jim George and E. L. Hendrix with scores of 71 for Rogers and George and 73 for Hendrix.

D. E. Littleton turned in a scorecard with 14 pars . . . J. D. Roberts, 13.

SECOND FLIGHT

Dayle Phillips shot an 81 to lead the second flight. He was followed by Jack Gamble, 82; F. K. Clabough, 84; and Joel Garber, who scored an 86.

Handicap winners were H. B. Presley, 71; Jack Gresham, 72; J. H. Wiley and Paul Johnson, each with 76.

Jim Batch, Harold Alvey and Virgil Lovett all carded eight pars.

THIRD FLIGHT

George Peterson turned in an 81 card to take honors in the third division. George's fine scratch score was followed by B. E. Sise, 84; Ron Green, 86; J. T. Parker, 87.

In handicap scorekeeping it was Hugh Henderson, 68; A. J. Naleppa, 72; Merle Emery and Roy Huddleston, each with 73.

Dan Culberson and W. K. Forrester each scored seven pars.

FOURTH FLIGHT

E. K. Cottongin and R. P. Rose tied for top honors in the fourth division, scoring 92 each scratch.

George Buxton scored 94 to come in third, and Ray Ellis scored 96.

In handicap shooting it was Larry A. McDonald, 68; Curt Ridings, 71; Fred Wetzel and R. E. Gray, each with 76.

R. G. Marlar parred six holes, and Bill McManus and L. G. Bryson had six pars also.

August's tournament will come Saturday, August 24, at Whittle Springs, Knoxville . . . greens fees \$2.



CITY PLANNER CONSTANTINE DOXIADIS lectures to students of architecture in Athens, Greene, about the city of the future. The problems and hopes of our cities in "The 21st Century" will be reported in the "Cities of the Future" episode which will be broadcast Sunday, July 28, at 6 p.m., EDT in color on the CBS Television Network. The program is carried locally by WBIR-TV, Channel 10, and is sponsored in the public interest by Union Carbide Corporation.

'Cities Of Future' Timely Subject For '21st Century' Program Sunday

The Utopian cities of the next century, so different from the decaying inner cities of today, are described in "The 21st Century" episode, "Cities of the Future," to be broadcast Sunday, July 28, at 6 p.m., EDT, in color on the CBS television network. The program is carried locally by WBIR-TV, Channel 10. Walter Cronkite, CBS News Correspondent, is principal reporter for the series, which is sponsored in the public interest by Union Carbide Corporation.

Buckminster Fuller will discuss the geodesic dome he would like to construct over mid-Manhattan, under which climate could be controlled. The diameter of the dome would be determined by the two-mile width of the island at Forty-second Street.

Kenzo Tange, a leading Japanese architect, proposes to solve the problem of gigantic Tokyo by bridging Tokyo Bay with a complex of giant structures. A some-

what similar plan, which would be adjustable to changes in a port city's needs, is a complex of floating islands that could be towed around as required.

Philadelphia's urban renewal is described as something now being done that presages the future. Another forecast is a newly constructed suburb of Stockholm, Sweden, which is so built that a child can walk to school and a family can go to the shopping center via a system of bridges and walkways, separated from automobiles.

Reston, Virginia, 18 miles west of Washington, is shown. Here row houses have been built around a central lake, leaving other acreage linked by treelined walkways, replacing separated backyards.

Writer-director of "Cities of the Future" is Gordon Hyatt. Fred Warshofsky is science editor for the series; Isaac Kleinerman is producer and Burton Benjamin is executive producer.

"Cities of the Future" Sunday, July 28, at 6 p.m. over WBIR-TV, Channel 10.



Ride wanted from Oakdale (will consider also ride from Wartburg or Harriman), to North Portal, J Shift. Joyce Hamby, plant phone 3-7102, home phone Oakdale 369-3297.

Three car pool members wanted from Karns section, Knox County, to North Portal, straight day. W. H. Rice, plant phone 3-7009, home Phone Knoxville 584-1414, or B. S. Turner, Powell 947-6783.

Ride wanted from 7030 Maryville Pike to East Portal, straight day. Patricia Jakeman, plant phone 3-5981, home phone Knoxville 577-6703.

Riders wanted from Pannsylvania Avenue and Illinois, to North or Central Portal, straight day. Dayle Thomas, plant phone 3-5465, home phone Oak Ridge 483-2688.

Ride wanted or will join car pool from Heather Heights, Knoxville, to Central or North Portal, straight day. Reva Castleberry, plant phone 3-7308, home phone Powell 947-1003.

Car pool member wanted from Norwood area, Knoxville, to North, Central or Bear Creek Portal, straight day. Eugene Keith, plant phone 3-5698, home phone Knoxville 689-2229.

Ride wanted or will join car pool from vicinity of Winter Garden Food plant, North Broadway, Knoxville, to North or Central Portal, straight day. Frances H. Weaver, plant phone 3-5261, home phone 524-2172.

Will join car pool from vicinity of Florida or Delaware Avenues, Oak Ridge, to Bear Creek Portal, straight day. J. F. Mannesmidt, plant phone 3-5486, home phone Oak Ridge 483-1563.

Will join car pool from U.T. area, Knoxville, to any portal, Y-12, straight day. Plant phone 3-7484, home phone Knoxville 523-2047.

Ride wanted from 102 Vernon Road, Oak Ridge, to Central Portal, straight day. W. T. Grigsby, plant phone 3-7060, home phone Oak Ridge 482-1567.

Ride wanted from Knoxville's Norwood section, to East Portal, straight day. Joan Clouse, plant phone 3-5968, home phone Knoxville 689-4874.

Union Carbide Ceylon Company Is Organized

The formation of a company in Ceylon, known as Union Carbide Ceylon Ltd., has been announced by Birney Mason Jr., chairman of the board. The company is majority owned by Union Carbide and local groups in Ceylon hold the minority interests.

The new subsidiary will build a modern battery plant near Colombo, the capital city of Ceylon. The plant, expected to be in operation in 1969, will produce dry cell batteries for flashlights, transistor radios and general applications.

Union Carbide affiliated companies have been active in the Far East for many years with marketing programs for batteries and plastics as well as agricultural chemicals and other chemical products.

try throughout the world. They hold many patents in the area, including the critical one describing the use of high-carbon ferrochrome for the most economical production of stainless steel.



UNION CARBIDE CORPORATION
NUCLEAR DIVISION
P. O. BOX Y, OAK RIDGE, TENNESSEE 37830

RETURN REQUESTED
(Do Not Forward—Return Postage Guaranteed)

BULK RATE
U.S. Postage
PAID
Oak Ridge, Tenn.
Permit No. 71



RUSSELL O. THORNTON, right, is welcomed into the Safety Department by Safety Head Clarence Johnson, left. Thornton, holding a BS degree in industry technology from Tennessee Technological University, worked two years in Safety with Republic Steel. He is married to the former Carol J. Barnett, and the couple lives at Route 2, Paint Rock Ferry Road, Kingston.

Harris Son Went To Boys' State



Bill Harris

Bill Harris, son of W. O. Harris, 9215 P-Wing Shop, recently attended Boys' State where he served as assistant city attorney. Boys' State, this year, was held at Tennessee Tech, Cookeville.

Bill will be a senior at Lake City High School next year, where he is active in the Beta Club, Future Teachers and serves as football manager. He is also a member of the Anderson County Youth In Government Council.

Young Harris has further connections in Y-12... his brother, T. C. Harris is in Y-12's Production Assay Laboratory.

The Harris home is at Route 2, Lake City.

BUYING POWER

The American woman spends about 60 per cent of the nation's money in consumer products. The male, naturally, accounts for the remaining 40 per cent.

There's more fun in doing things than in having them.



Amid long, hot summer days, vacations, picnics, and what-have-you, more Y-12ers observe important dates with Union Carbide Corporation. Congratulations.

25 YEARS

Michael Getsi, Electrical Department, July 24.

King C. Fritts, Buildings, Grounds and Maintenance Shops, July 26.

John R. Pitts, Electrical Department, July 26.

20 YEARS

James E. Miner, Chemical Engineering Development, July 24.

Roland Y. Drumwright, Tool Grinding, July 26.

William P. Smith, Facilities Engineering, July 26.

15 YEARS

Paul L. Beeler, Utilities Administration, July 24.

Henry W. Clear, Tool Grinding, July 26.

John P. Furlong, Area Five Maintenance, July 27.

Lawrence M. McLaughlin Jr., Ceramics and Plastics Development, July 27.

Hayward G. Taylor, Alpha Five Processing, July 27.

Horace E. Hamilton Sr., Dispatching Department, July 29.

Elmer O. Lamb, General Field Shops, July 29.

Willie H. Aiken, Buildings, Grounds and Maintenance Shops, July 30.

10 YEARS

Frank F. Carringer Jr., Critical Path and Regular Production Scheduling, July 28.

William W. Lee Jr., Laboratory Development, July 28.

Daniel L. Morgan, Data Processing, July 28.

MAN'S BEST FRIEND

It may be only a coincidence. But have you ever thought about it? Man's best friend can't talk.

Recreation



calendar

Monday, July 29

GOLF: Southwest Point, after work, Southwest Point, Kingston.
PHYSICAL FITNESS (Women): 7:30 p.m. Oak Ridge High School Girls' Gym.

SOFTBALL: Beginning 6:15 p.m. Pinewood Park, Big Shops vs. Eagles; Braves vs. J-Birds; Bat Boys vs. Gashouse Gang.

Tuesday, July 30

PHYSICAL FITNESS (Men): 7:30 p.m. Oak Ridge High School Gym.

PISTOL LEAGUE: 6:15 p.m. Oak Ridge Sportsmen's Association.

SOFTBALL: Beginning 6:15 p.m. Pinewood Park. White Sox vs. UCC All Stars; Beta Two vs. K-25 Colts; Pirates vs. Cardinals.

Wednesday, July 31

GOLF: Melton Hill League, after work, Melton Hill, Clinton.

Thursday, August 1

SOFTBALL: Beginning 6:15 p.m. Pinewood Park. Braves vs. White Sox; J-Birds vs. Big Shops; UCC All Stars vs. Beta Two.

HORSESHOE: 7 p.m. City Courts, Oak Ridge.

Sunday, August 4

SKEET TOURNAMENT: 1 p.m. Oak Ridge Sportsman's Association.

Stainless Steel

Continued from Page 1

Union Carbide process is that more high-carbon ferrochrome—the least expensive kind—can be used. In present practices, when low cost chromium is included in the charge, decarburization with oxygen oxidizes considerable chromium so that the amount of low cost chromium used must be restricted. In the new process, argon injection during decarburization promotes carbon removal with minimum effect on chromium. This permits adding to the furnace charge essentially all the chromium needed in the final product as low cost high-carbon ferrochrome. Since very little of this is oxidized during decarburization, the need for low-carbon ferrochrome later in the refining process is very substantially reduced.

Union Carbide has long been a pioneer in stainless steel manufacturing advances having developed the critical low-carbon ferrochrome technology over 40 years ago and oxygen use practices about 25 years ago. Corporation scientists have presented man authoritative papers on the subject of stainless steels, the teachings of which have been widely adopted in the steel indus-